

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/779,854	GEERAERT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shaima Q. Aminzay	2684	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 30 June 2004.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on 08 January 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

## ***DETAILED ACTION***

### ***Allowable Subject Matter***

1. Claims 1-18 are allowed.

### ***Reasons for Allowance***

2. The following is an examiner's statement of reason for allowance:

None of the prior art of the record either singularly or in combination teaches or fairly suggests balanced antenna wherein the first antenna element has a face lying in a first antenna plane and a second antenna element has a face lying in a second antenna plane the faces are substantially **parallel** and spaced apart from each other in a direction **perpendicular** to one of the first and second antenna planes, and wherein each of the antenna elements has a feed point connectable to a different output from the power amplifier stage. as disclosed in claims 1, 16, and 17.

Cited reference Pierro (US Patent No. 5,614,863) teaches a balanced antenna for connecting to a balanced power amplifier stage (Figure 2 and column 2, lines 23 – 28) including first and second outputs (Figure 2 and starting column 7, lines 64 and ending column 8, line 9). Matsuyoshi (US Patent No. 6,549,169) teaches a portable communications device (Figures 2 and 3 and column 6, lines 39 – 41) and antenna with a ground plane (column 7, lines 64 – 65) and antenna elements spaced apart from each other and from the ground plane (Figure 3A and starting column 7, line 44 and ending column 8, line 2). Nghiem (World

Intellectual Property Organization, WO 98/44588) teaches antenna elements where each of the elements lies on a plane and the elements are spaced parallel apart from each other (Figure 2 and page 6, lines 21 –33, page 8, lines 1 –8).

However, the references do not expressly teach that the first antenna element has a face lying in a first antenna plane and a second antenna element has a face lying in a second antenna plane the faces are substantially **parallel** and spaced apart from each other in a direction **perpendicular** to one of the first and second antenna planes, and wherein each of the antenna elements has a feed point connectable to a different output from the power amplifier stage.

For these reasons, independent claims 1, 16, and 17 are allowed. Claims 2-19 which depend from independent claim 1 are allowed under the same reasons set forth in claim 1.

None of the prior art of the record either singularly or in combination teaches or fairly suggests “a method of manufacturing a balanced antenna for connecting to a balanced power amplifier stage in a portable communications device, the balanced power amplifier stage including first and second outputs, the antenna comprising a ground plane and first and second antenna elements, the first antenna element having a face lying in a first antenna plane and the second antenna element having a face lying in second antenna planes, wherein the faces are spaced apart from each other in a direction perpendicular to one of the first and second antenna planes and from the ground plane, wherein the antenna

elements are arranged to be opposite one another and to overlap to a predetermined extent, and each of the antenna elements has a feed point connectable to a different output from the balanced power amplifier stage, the method comprising varying the extent to which the antenna elements overlap to tune the antenna for use in a predetermined frequency band” as disclosed in claim 18.

Cited reference Pierro (US Patent No. 5,614,863) teaches a balanced antenna for connecting to a balanced power amplifier stage (Figure 2 and column 2, lines 23 – 28) including first and second outputs (Figure 2 and starting column 7, lines 64 and ending column 8, line 9). Matsuyoshi (US Patent No. 6,549,169) teaches a portable communications device (Figures 2 and 3 and column 6, lines 39 – 41) and antenna with a ground plane (column 7, lines 64 – 65) and antenna elements spaced apart from each other and from the ground plane (Figure 3A and starting column 7, line 44 and ending column 8, line 2). Nghiem (World Intellectual Property Organization, WO 98/44588) teaches antenna elements where each of the elements lies on a plane and the elements are spaced parallel apart from each other (Figure 2, and page 6, lines 21–33, page 8, lines 1–8). Yanagisawa (US Patent No. 6,130,651) teaches a method of folded (overlapped) antenna elements and varying extent (column 3, lines 12–25).

However, the references do not expressly teach that the faces are spaced apart from each other in a direction perpendicular to one of the first and second antenna planes and from the ground plane, wherein the antenna elements are

arranged to be opposite one another and to overlap to a predetermined extent,  
and each of the antenna elements has a feed point connectable to a different  
output from the balanced power amplifier stage.

For these reasons, independent claim 18 is allowed.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

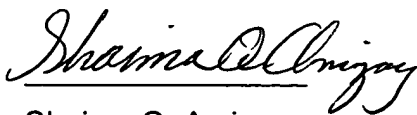
### ***Conclusion***

1. The prior art made of record considered pertinent to applicant's disclosure, see PTO-892 form.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 703-305-8723. The examiner can normally be reached on 7:00 AM -5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shaima Q. Aminzay

(Examiner)

December 21, 2004



NICK CORSARO  
PRIMARY EXAMINER

Nay Maung

(SPE)

Art Unit 2684